



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re application of:

KUBO *et al.*

Appl. No. 09/665,510

Filed: September 19, 2000

For: **HLA Binding Peptides and Their
Uses**

Confirmation No. 7164

Art Unit: 1644

Examiner: Schwadron, R.B.

Atty. Docket: 2060.005000D/HCC/PAC

**Second Supplemental Information Disclosure Statement under 37
C.F.R. § 1.97(b)**

Commissioner for Patents
Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. A copy of each document is also provided.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the

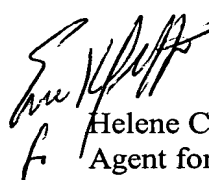
teachings purportedly offered. This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.

Consideration of the cited documents and making the same of record in the prosecution of the above-identified application is respectfully requested. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

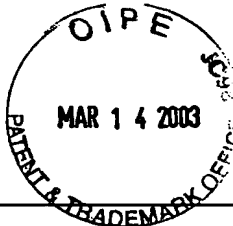
Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

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f Helene C. Carlson
Agent for Applicants
Registration No. 47,473

Date: 3/14/03

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FORM PTO-1449 <u>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT</u>	ATTY. DOCKET NO. 2060.005000D/HCC/PAC	APPLICATION NO. 09/665,510
	APPLICANT Kubo et al.	
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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA1	5,503,829	04/02/1996	Ladant et al.			11/07/1994
	AB1	5,662,907	09/02/1997	Kubo et al.			01/25/1994
	AC1	2002/0168374 A1	11/14/2002	Kubo et al.			03/20/1997
	AD1	2002/0177694 A1	11/28/2002	Sette et al.			02/03/1998
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FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION
	AL1	EP 0 044 710 A1	01/27/1982	Europe			Yes No
	AM1	WO 93/03764	03/04/1993	WIPO			Yes No
	AN1	WO 94/03205	02/17/1994	WIPO			Yes No
	AO1	WO 94/20127	09/15/1994	WIPO			Yes No
	AP1	WO 96/03140	02/08/1996	WIPO			Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>1</u>	Aichele, P., et al., "Antiviral cytotoxic T cell response induced by in vivo priming with a free synthetic peptide," <i>J. Exp. Med.</i> 171:1815-1820, Rockefeller University Press (1990)
	AS	<u>1</u>	Bertoni, R., et al., "Human Class I Supertypes and CTL Repertoires Extend to Chimpanzees," <i>J. Immunol.</i> 161:4447-4455, The American Association of Immunologists (October 1998)
	AT	<u>1</u>	Bjorkman, P.J., et al., "The foreign antigen binding site and T cell recognition regions of class I histocompatibility antigens," <i>Nature</i> 329:512-518, Nature Publishing Company (1987)

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



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	AM						Yes No
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	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
AR	<u>2</u>	Corr, M., et al., "Endogenous Peptides of a Soluble Major Histocompatibility Complex Class I Molecule, H-2L ^d :Sequence Motif, Quantitative Binding, and Molecular Modeling of the Complex," <i>J. Exp. Med.</i> 176:1681-1692, Rockefeller University Press (December 1992)	
AS	<u>2</u>	Culmann, B., et al., "Six Epitopes Reacting with Human Cytotoxic CD8 ⁺ T Cells in the Central Region of the HIV-1 Nef Protein," <i>J. Immunol.</i> 146:1560-1565, The American Association of Immunologists (March 1991)	
AT	<u>2</u>	Deres, K., et al., "In vivo priming of virus-specific cytotoxic T lymphocytes with synthetic lipopeptide vaccine," <i>Nature</i> 342:561-564, Macmillan Publishers, Ltd. (1989)	

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>3</u>	Falk, K., et al., "MHC peptide motif register. Peptide motifs of HLA-B35 and -B37 molecules," <i>Immunogenetics</i> 38:161-162, Springer-Verlag (April 1993)
	AS	<u>3</u>	Falk, K., et al., "Allele-specific peptide ligand motifs of HLA-C molecules," <i>Proc. Natl. Acad. Sci. USA</i> 90:12005-12009, National Academy Press (December 1993)
	AT	<u>3</u>	Falk, K., et al., "Pool sequencing of natural HLA-DR, DQ, and DP ligands reveals detailed peptide motifs, constraints of processing, and general rules," <i>Immunogenetics</i> 39:230-242, Springer-Verlag (February 1994)

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>4</u>	Falk, K., et al., "Peptide motifs of HLA-A1, -A11, -A31, and -A33 molecules," <i>Immunogenetics</i> 40:238-241, Springer-Verlag (July 1994)
	AS	<u>4</u>	Geysen, H.M., et al., "Cognitive Features of Continuous Antigenic Determinants," <i>J. Mol. Recognit.</i> 1:32-41, Heyden & Sons, Ltd. (1988)
	AT	<u>4</u>	Hill, A., et al., "Characterization of two Epstein-Barr virus epitopes restricted by HLA-B7," <i>Eur. J. Immunol.</i> 25:18-24, VCH Verlagsgesellschaft mbH (January 1995)

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	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>5</u>	Kast, W.M., et al., "Protection against lethal Sendai virus infection by <i>in vivo</i> priming of virus-specific cytotoxic T lymphocytes with a free synthetic peptide," <i>Proc. Natl. Acad. Sci. USA</i> 88:2283-2287, National Academy Press (March 1991)
	AS	<u>5</u>	Maryanski, J.L., et al., "Synthetic Peptides as Antigens and Competitors in Recognition by H-2-Restricted Cytolytic T Cells Specific for HLA," <i>J. Exp. Med.</i> 167:1391-1405, The Rockefeller University Press (1988)
	AT	<u>5</u>	Parham, P., et al., "The Origins of HLA-A,B,C Polymorphism," <i>Immunol. Rev.</i> 143:141-180, Munksgaard (February 1995)

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>6</u>	Parker, K.C., et al., "Sequence Motifs Important for Peptide Binding to the Human MHC Class I Molecule HLA-A2," <i>J. Immunol.</i> 149:3580-3587, The American Association of Immunologists (December 1992)
	AS	<u>6</u>	Parker, K.C., et al., "Scheme for Ranking Potential HLA-A2 Binding Peptides Based on Independent Binding of Individual Peptide Side-Chains," <i>J. Immunol.</i> 152:163-175, The American Association of Immunologists (January 1994)
	AT	<u>6</u>	Reddehase, M.J., et al., "A pentapeptide as minimal antigenic determinant for MHC class I-restricted T lymphocytes," <i>Nature</i> 337:651-653, Macmillan Publishers, Ltd. (1989)

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AR	7	Rothbard, J.B., "Major histocompatibility complex-peptide interactions," <i>Curr. Opin. Immunol.</i> 2:99-105, Current Biology, Ltd. (1989)	
AS	7	Röttschke, O., and Falk, K., "Origin, structure and motifs of naturally processed MHC class II ligands," <i>Curr. Opin. Immunol.</i> 6:45-51, Current Biology, Ltd. (February 1994)	
AT	7	Rudinger, J., "Characteristics of the amino acids as components of a peptide hormone sequence," in <i>Peptide Hormones</i> , Parsons, J.A., ed., University Park Press, Baltimore, MD, pp.1-7 (1976)	

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>8</u>	Ruppert, J., et al., "Prominent Role of Secondary Anchor Residues in Peptide Binding to HLA-A2.1 Molecules," <i>Cell</i> 74:929-937, Cell Press (September 1993)
	AS	<u>8</u>	Schulz, M., et al., "Major histocompatibility complex binding and T cell recognition of a viral nonapeptide containing a minimal tetrapeptide," <i>Eur. J. Immunol.</i> 21:1181-1185, VCH Verlagsgesellschaft mbH (May 1991)
	AT	<u>8</u>	Sidney, J., et al., "Several HLA Alleles Share Overlapping Peptide Specificities," <i>J. Immunol.</i> 154:247-259, The American Association of Immunologists (January 1995)

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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>2</u>	Whitton, J.L., et al., "Molecular Analyses of a Five-Amino-Acid Cytotoxic T-Lymphocyte (CTL) Epitope: an Immunodominant Region Which Induces Nonreciprocal CTL Cross-Reactivity," J. Virol. 63:4303-4310, American Society for Microbiology (1989)
	AS	<u>2</u>	Copy of co-pending U.S. application 08/205,713, inventor Grey, filed March 4, 1994 (NOT PUBLISHED).
	AT	<u>2</u>	Copy of co-pending U.S. application 08/344,824, inventors Sette et al., filed November 23, 1994 (NOT PUBLISHED).

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	AR	<u>10</u>	Copy of co-pending U.S. application 08/347,610, inventors Kubo et al., filed December 1, 1994 (NOT PUBLISHED).
	AS	<u>10</u>	Copy of co-pending U.S. application 08/452,843, inventors Sette et al., filed March 30, 1995 (NOT PUBLISHED).
	AT	<u>10</u>	Copy of co-pending U.S. application 09/017,524, inventors Kubo et al., filed February 3, 1998 (NOT PUBLISHED).

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